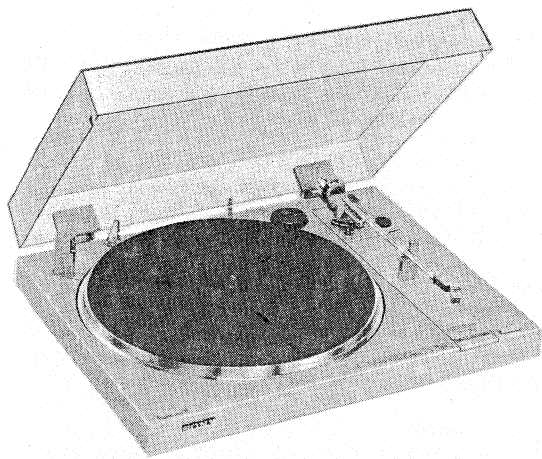


STEREO TURNTABLE SYSTEM

PS-LX3

**OPERATING INSTRUCTIONS** Page 2

Before operating the unit, please read this manual thoroughly.
This manual should be retained for future reference.

MODE D'EMPLOI page 16

Avant toute opération, lire attentivement ce mode d'emploi.
Conserver ce manuel pour toute référence ultérieure.

BEDIENUNGSANLEITUNG Seite 30

Vor Inbetriebnahme lesen Sie bitte diese Bedienungsanleitung
aufmerksam durch.
Bewahren Sie diese Anleitung zum späteren Nachschlagen gut auf.

MANUAL DE INSTRUCCIONES Página 44

Antes de manipular el aparato, lea este manual detenidamente.
Consérvelo para futuras referencias.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

TABLE OF CONTENTS

Features	2
Operating voltage.....	3
Precautions	3
Location of controls.....	4
Turntable assembly	4
Tonearm assembly	5
Connections	6
Record playing—Auto play	6
Preparation	
To begin record play at a particular point—Manual play	
To lift up the stylus during play	
To stop during play	
To repeat play	
How the auto record size selection works	7
Synchronized play of the turntable and the cassette deck.....	8
Remote control operation with an optional remote controller	9
Replacing the stylus	9
Installing a cartridge other than the one supplied.....	10
Tonearm balance adjustment	
Tracking force adjustment	
Anti-skating compensation	
Tips on record handling	12
Tonearm drop-point adjustment.....	12
Maintenance	12
Specifications	13
Trouble checks	14

FEATURES

Auto record size selection

Record size is automatically set by a photo sensor system. If no record is on the turntable, the tonearm will not move.

Synchronized operation with the Sony cassette decks

When the tonearm lowers to the lead-in groove of a record, the cassette deck stand-by mode is released and the record mode assumed.

When play finishes, the cassette deck is automatically set first in the record muting mode, then in the pause mode. This synchronized operation is possible when the turntable is connected to a Sony cassette deck equipped with a four-pin remote control jack by a Sony RM-65 synchro remote control unit.

Muting system

The muting system activates when the tonearm is lifted and deactivates after the tonearm lowers onto a record. There is no need to turn down the amplifier volume every time a stylus is placed on a record or when a cartridge is changed.

Magnedisc servo system

The turntable is servo-controlled with aid of a precise speed monitoring system which utilizes a magnetic pick-up head and a pulse signal derived from a magnetic coating at the edge of the platter.

Linear torque BSL motor

Direct drive system with Sony's unique BSL (Brushless and slotless) motor which has a high signal-to-noise ratio to virtually eliminate wow and flutter. The motor's high torque assures a quick attainment of 33 $\frac{1}{3}$ rpm after only half a revolution.

Remote control operation

When connected to the optional RM-S5 System Remote Controller, automatic start/stop can be done controlled remotely by an infrared ray transmitted from the RM-S5C System Remote Commander supplied with the remote controller.

Easily-adjusted tracking force

Using the supplied tracking force setting guide, it is easy to position the counterweight so that the precise tracking force for the supplied cartridge will be applied.

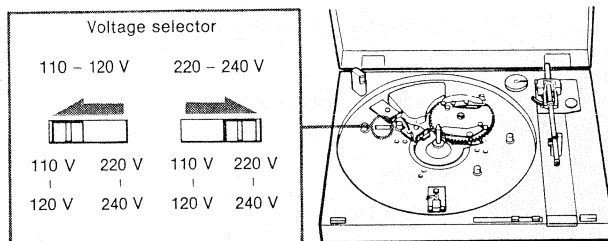
Disc centering guides

Disc centering guides facilitate placing a 30 cm record over the center spindle.

OPERATING VOLTAGE

Before connecting the unit to the power source, check that the operating voltage of your unit is the same as the local power line voltage.

The model for European countries (Type 1) operates on 220 V ac. The model for the United Kingdom (Type 2) operates on 240 V ac. The model for other countries and PX models (Type 3) operates on either 110-120 or 220-240 V ac. The voltage selector is located on the motor board (under the platter). If the selector must be reset, disconnect the ac power cord and slide the selector to the desired voltage.



For the Customers in the United Kingdom

Important

The wires in the mains lead are coloured in accordance with the following code:

- Blue: Neutral
- Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

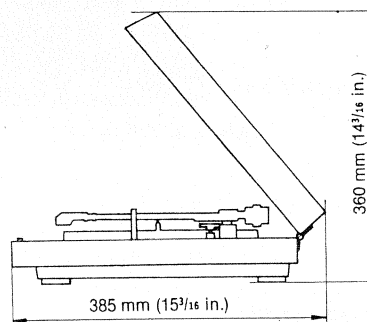
PRECAUTIONS

On safety

- Before operating the unit, be sure that the operating voltage of your unit is identical with that of your local power supply.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On installation

- Place the turntable on a level surface.
- Avoid placing the unit near electrical appliances (such as a television, hair dryer, or fluorescent lamp) which may cause hum or noise.
- Place the turntable where it will not be subject to any vibration, such as from speakers, slamming of doors, etc.
- Keep the unit away from direct sunlight, extremes of temperature, and excessive dust and moisture.
- Allow at least 10 cm (4 inches) clearance behind the unit so that the cover can be opened.

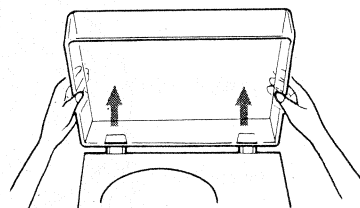


On auto record size selection

A beam from a lamp is transmitted through the holes in the rubber mat to the photo detector which activates the record size selection. The 17 cm (7 inch) record size is selected when the inner holes are covered and the lamp beam goes through the outer holes. The 30 cm (12 inch) record size is selected when both inner and outer holes are covered so that the photo detector senses no beam. When the beam is transmitted through all the holes to the photo detector, no record is on the platter and the tonearm does not lower to the platter.

On dust cover removal

Open the dust cover fully and slide it upward with both hands.

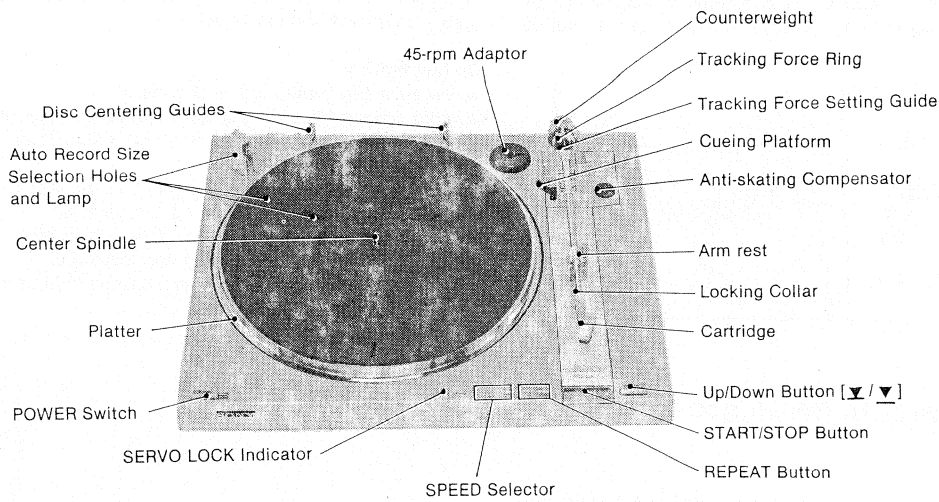


On repacking

Do not throw away the carton and packing materials. It is an ideal container in which to transport the unit. When shipping the unit to another location, secure the tonearm to the arm rest and repack it as illustrated on the carton box.

LOCATION OF CONTROLS

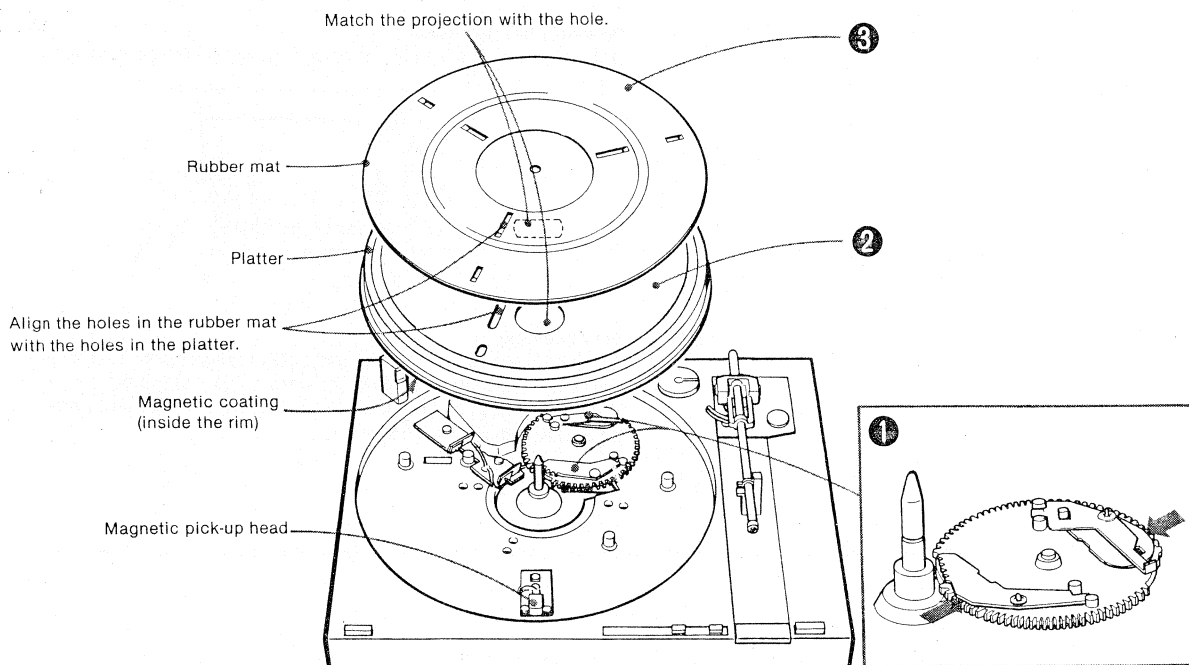
The picture below shows the assembled turntable.



TURNTABLE ASSEMBLY

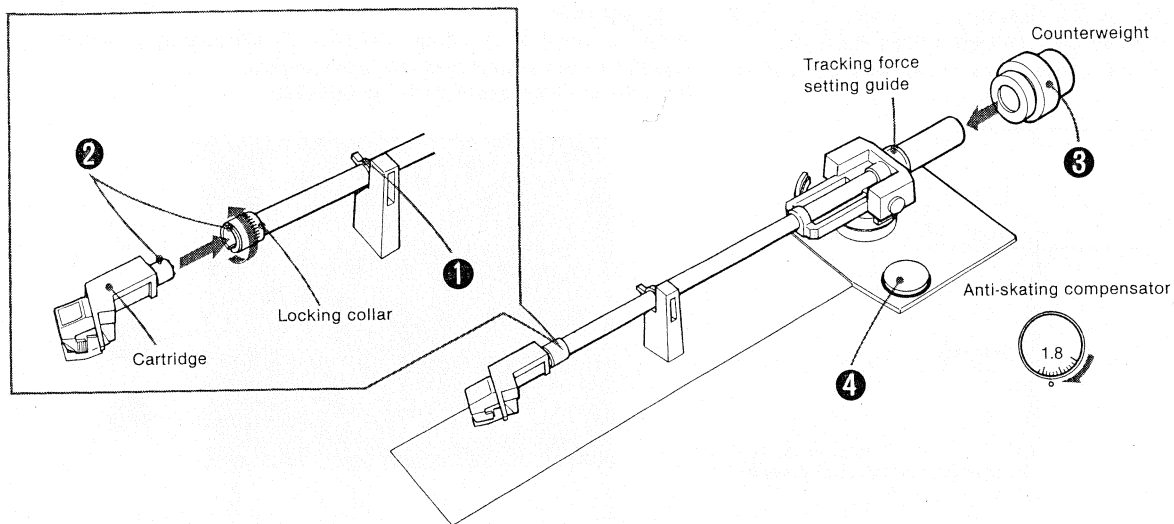
Do not connect the power cord or the connecting cords until the turntable has been completely assembled.
Remove all packing material and wipe the cabinet off.
Save the packing box and materials for possible future use.
The numbers in the illustration refer to the sequence of assembly.

- ❶ Keep the parts indicated by the arrows in the illustration inside the large white gear.
- ❷ Carefully place the platter on the motor board by fitting the center hole over the center spindle. Be careful that no foreign objects lodge under the platter.
- ❸ Do not touch the magnetic coating or the magnetic pick-up head.
- ❹ Place the rubber mat on the platter, aligning the holes in the rubber mat and the holes in the platter.



TONARM ASSEMBLY

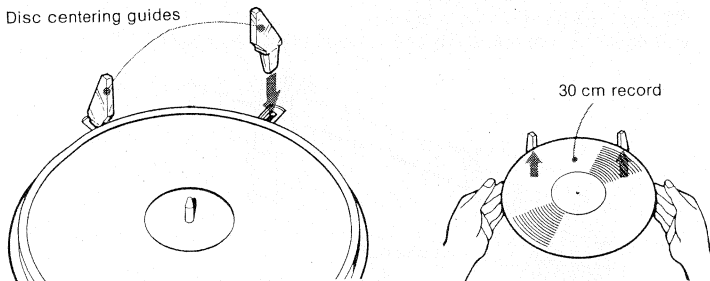
- 1 Secure the tonearm to the arm rest.
- 2 Plug the supplied cartridge into the tonearm and turn the locking collar counterclockwise until the cartridge is firmly locked.
- 3 Insert the counterweight and screw it up to the tracking force setting guide, so that the correct tracking force for the supplied cartridge is applied.
- 4 Turn the anti-skating compensator so that the guide mark is aligned with 1.8.



Disc centering guide installation

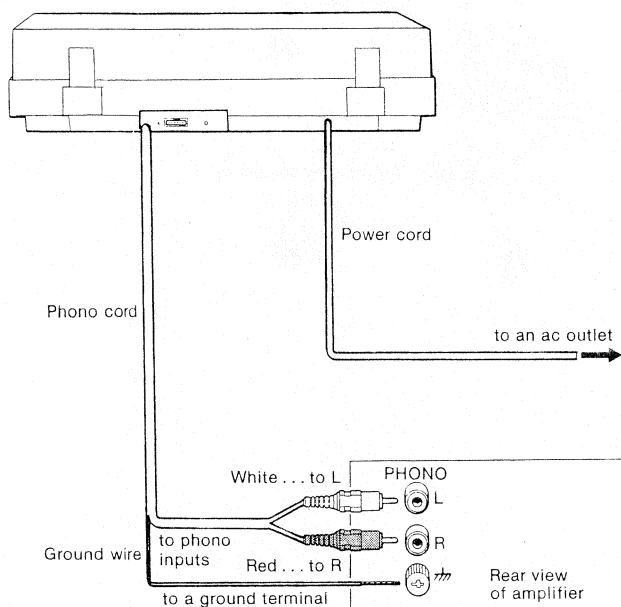
Insert the supplied disc centering guides as illustrated.

Disc centering guides



CONNECTIONS

- Turn off the amplifier before making connections.
- Be sure to insert the cable connectors firmly into the jacks. Loose connections may cause hum and noise.
- Connect the red plug of the connecting cord to the right-channel jack [R]. Otherwise, the right and left channels will be reversed.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.

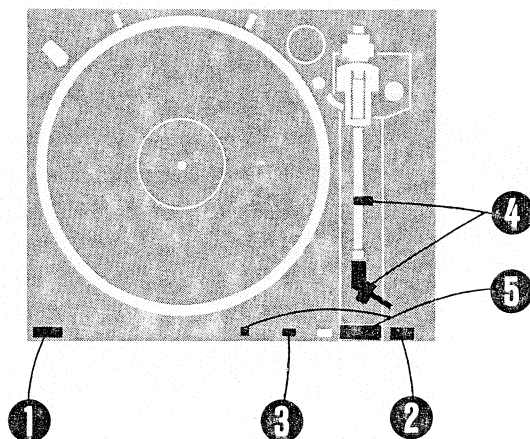


RECORD PLAYING—Auto play

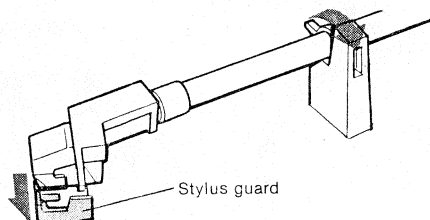
The auto record size selection function automatically adjusts to either 30 cm (12 inch) or 17 cm (7 inch) records.

PREPARATION

- Place a record on the platter. For 17 cm (7 inch) records, put the supplied 45-rpm adaptor over the center spindle.
- Set the amplifier input selector to PHONO.



- 1 Press the POWER switch (ON).
- 2 Press the ∇ / ∇ button (∇).
- 3 Select the correct record speed.
- 4 Unlock the arm rest latch and remove the stylus guard.



- 5 Press the START/STOP button. Play will begin. The SERVO LOCK indicator will illuminate when the turntable rotation is locked with the nominal speed.

When the tonearm reaches the end of the record, it will automatically return to the arm rest and the turntable will stop.

Note

After when the turntable has been subjected to strong vibration or shock, the auto record size selection may malfunction as follows.

- The tonearm will lower onto the platter when there is no record on it.
- The tonearm will lower on the point for a 17 cm record when a 30 cm record is to be played.

If this happens, press the START/STOP button to return the tonearm to the arm rest, and press the button again to restart play.

- TO BEGIN RECORD PLAY AT A PARTICULAR POINT—Manual play**
- ① Press the POWER switch (ON) and select the correct record speed.
 - ② Unlock the arm rest latch and remove the stylus guard.
 - ③ Bring the tonearm to the point over the record at which you want play to begin.
 - ④ Press the START/STOP button. Play will begin.

When the tonearm reaches the end of the record, it will automatically return to the arm rest and the turntable will stop.

Note

If you bring the tonearm to near the label of the record, the tonearm will return a little because of the automatic return mechanism.

TO LIFT UP THE STYLUS DURING PLAY

To listen to another part of the record being played, or to lift up the stylus on a record for a brief moment and start playing from the same point, press the **⏮ / ⏭** button.

The tonearm will be lifted up. To lower it again, press the button again.

TO STOP DURING PLAY

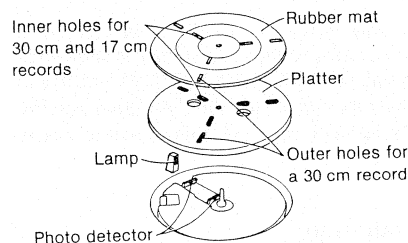
Press the START/STOP button. The tonearm will return to the arm rest and the turntable will stop rotating.

TO REPEAT PLAY

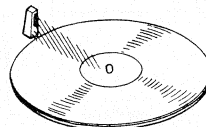
Press the REPEAT button either before or after starting play. The tonearm continues repeat play unless the button is pressed again to turn off the repeat function. To stop during repeat play, press to release the REPEAT button, and press the START/STOP button.

HOW THE AUTO RECORD SIZE SELECTION WORKS

When the START/STOP button is pressed, the tonearm goes automatically into the lead-in groove, whether the record is 30 cm or 17 cm. A beam from the lamp is transmitted through the holes on the rubber mat and the platter to the photo detector which activates the auto record size selection.

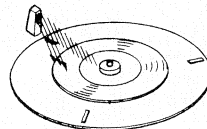


When a 30 cm record is to be played,



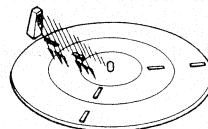
both inner and outer holes are covered so no beam is transmitted to the photo detector.

When a 17 cm record is to be played,



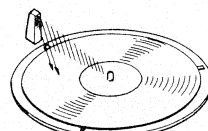
the inner holes are covered so a beam is transmitted through the outer holes to the photo detector.

When there is no record on the platter,



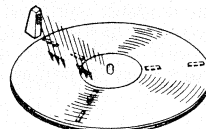
a beam is transmitted through both the inner and outer holes to the photo detector. Even if the START/STOP button is accidentally pressed, the tonearm does not move.

When a 25 cm record is to be played,



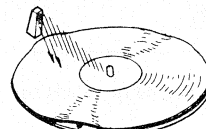
the tonearm lowers to the same point if a 17 cm record were on the platter, since only the inner holes are covered. To play a 25 cm record, turn the rubber mat 180° so that the inner and outer holes are covered and proceed as in "TO BEGIN RECORD PLAY AT A PARTICULAR POINT."

When a transparent record is to be played,



a beam passes through both the inner and outer holes to the detector so the tonearm does not move. To play a transparent record, turn the rubber mat 180° so that the inner and outer holes are covered and proceed as in "TO BEGIN RECORD PLAY AT A PARTICULAR POINT."

When a warped record is to be played,



if the record is badly warped, a beam may pass through the holes to the detector and cause malfunction of the auto record size selection.

SYNCHRONIZED PLAY OF THE TURNTABLE AND THE CASSETTE DECK

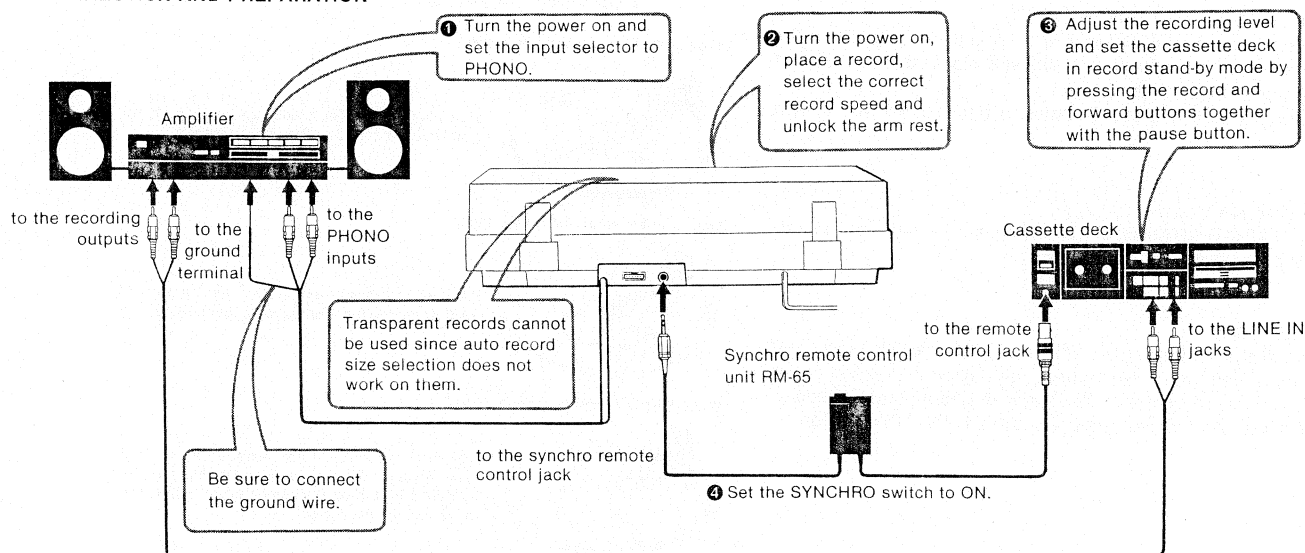
—with an RM-65 synchro remote control unit connected

Record recording starts only when the START/STOP button is pressed. When the tonearm lowers to the record, the cassette deck goes into the record mode and, when the START/STOP button is pressed again and the tonearm is lifted up, the deck goes into the auto record muting mode for four seconds, then into the pause mode.

Cassette decks which can be used with your turntable for this special synchronized operation are those Sony models which are equipped with a 4-pin remote control jack.

An RM-65 synchro remote control unit (optional) is required to connect the turntable and the cassette deck.

CONNECTION AND PREPARATION



RECORDING

Desired action	Turntable operation	Synchronized operation of the cassette deck
To record from the beginning of a record...	Press the START/STOP button.	When the tonearm lowers to the record, the pause mode is released and recording begins.
To record from a point some way into the record...	Bring the tonearm over the desired point and press the START/STOP button.	When the tonearm lowers to the record, the pause mode is released and recording begins.
To stop recording during record play...	Press the START/STOP button.	When the tonearm is lifted up, auto record muting activates for four seconds, then the pause mode is assumed.
When record play ends...	The tonearm returns automatically to the arm rest.	When the tonearm is lifted up, auto record muting activates for four seconds, then the pause mode is assumed.

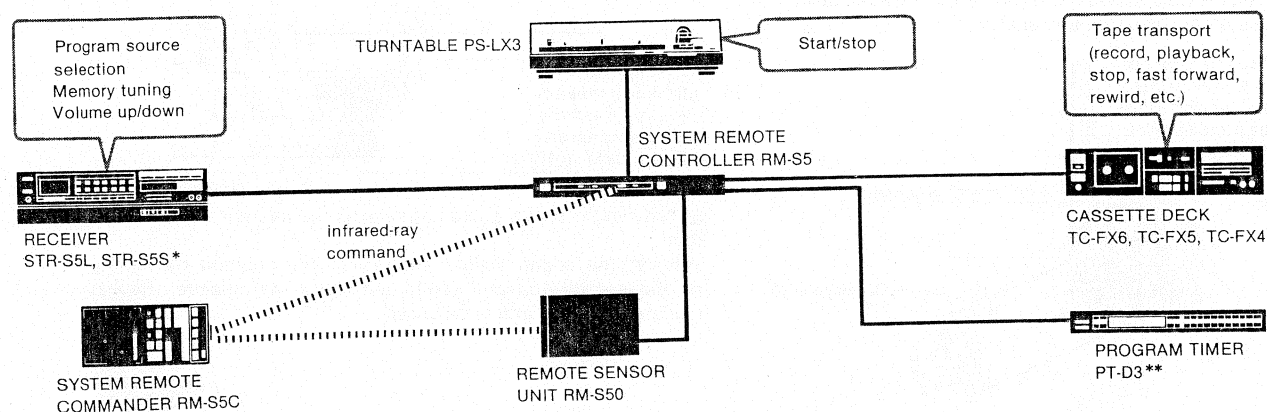
Note: Be sure to set the SYNCHRO switch of the RM-65 to OFF when you do not want to use the synchronized play function.

REMOTE CONTROL OPERATION WITH AN OPTIONAL REMOTE CONTROLLER

Start/stop of record play can be remotely controlled using the optional RM-S5 System Remote Controller. The turntable, as well as other audio components, can be linked to the remote controller. The remote controller, with its infrared ray sensor, can control connected components, commands being transmitted by a touch of the buttons of the RM-S5C System Remote Commander (supplied with the RM-S5).

The RM-S50 Remote Sensor Unit is also available for remote control operation from another room.

● For detailed information, refer to the remote controller's instruction manual.



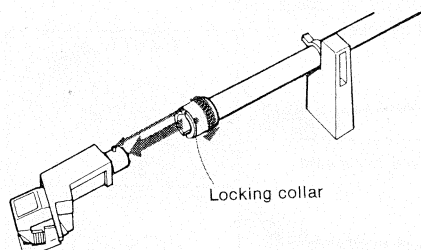
* The STR-S5L is available in the United Kingdom and European countries and the STR-S5S in other countries.
 ** The PT-D3 is available in the United Kingdom and European countries.

REPLACING THE STYLUS

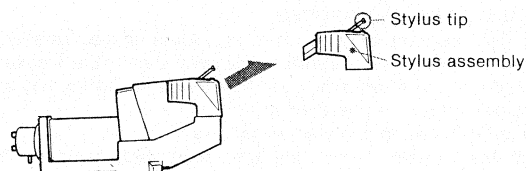
The stylus will lose its effectiveness and begin to damage records after about 400 hours of use.

An ND-150G replacement stylus is available at your Sony dealer. Handle the stylus carefully as it is very delicate. Install the replacement stylus as follows.

① Secure the tonearm to the arm rest and separate the cartridge from the tonearm by turning the locking collar in the direction of the arrow.



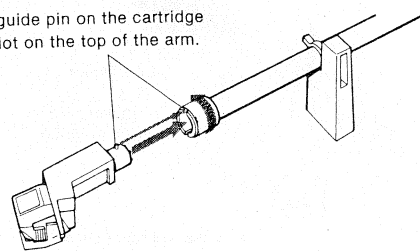
② Detach the stylus assembly by grasping it between the thumb and forefinger and pulling gently in the direction of the arrow.



③ Insert the new stylus into the cartridge.

④ Plug the cartridge into the tonearm and turn the locking collar counterclockwise until the cartridge is locked.

Align the guide pin on the cartridge with the slot on the top of the arm.

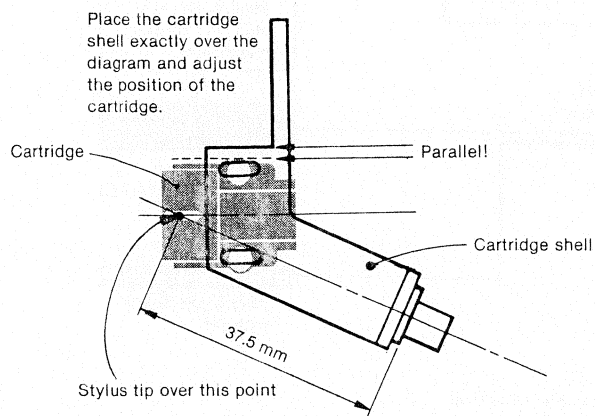


INSTALLING A CARTRIDGE OTHER THAN THE ONE SUPPLIED

Since the cartridge supplied with this turntable is unified with the shell, if you want to use a different cartridge, you will need an appropriate cartridge shell (Sony SH-151). The total weight of the cartridge and shell must be between 7.5 grams and 12 grams.

Connect the lead wires of the shell to the corresponding pins on the cartridge and install the cartridge in the shell as illustrated.

For details on the connection of the lead wires, refer to the instruction manuals of the cartridge and shell.



After installing the new cartridge and shell, adjust the tonearm's balance, tracking force, and anti-skating compensation as follows.

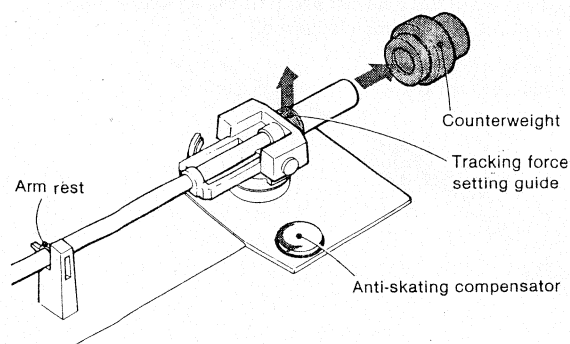
- The turntable must be on a level surface while the tonearm is being adjusted.
- Be careful not to damage the stylus tip while making adjustments.

TONEARM BALANCE ADJUSTMENT

It is critically important for good sound reproduction that the stylus traces the record groove accurately and with the proper tracking force. To do this, the tonearm must first be balanced so that the proper tracking force can be applied.

To balance the tonearm, proceed as follows:

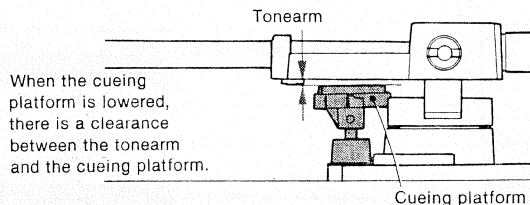
- 1 Secure the tonearm to the arm rest and remove the counterweight and the tracking force setting guide.
- 2 Set the anti-skating compensator to "0".



3 Press the ∇ / ∇ button (∇).

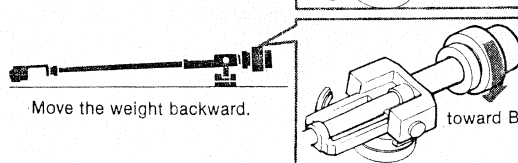
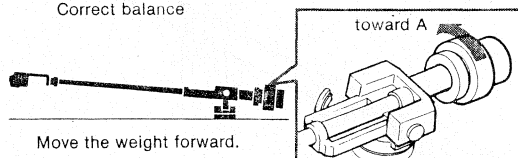
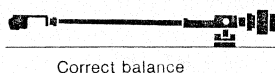
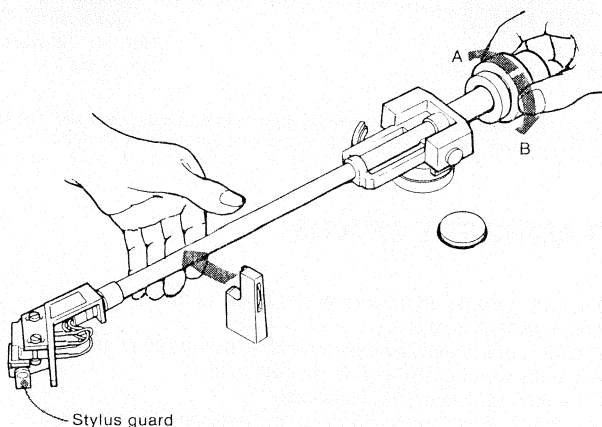
4 Place a record on the platter and press the POWER switch (ON).

5 Press the START/STOP button. This will cause the turntable to rotate and the cueing platform to lower. After the cueing platform has lowered, press the POWER switch again to turn the unit off and stop the turntable by hand.



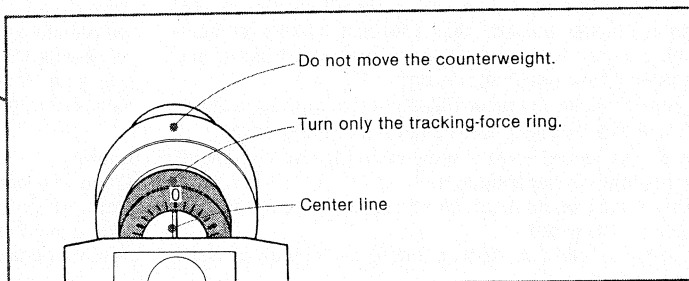
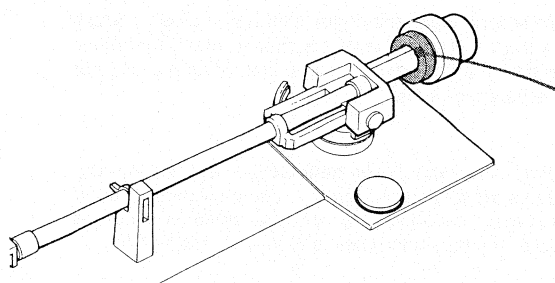
6 Remove the stylus guard and release the tonearm from the arm rest.

7 Insert the counterweight and adjust the position by turning it. Release the tonearm gently and check the balance. Repeat this step until the arm is balanced.



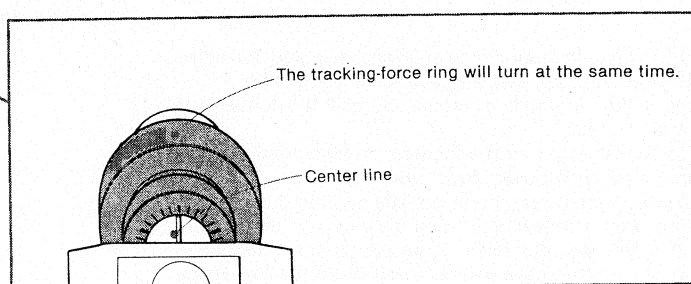
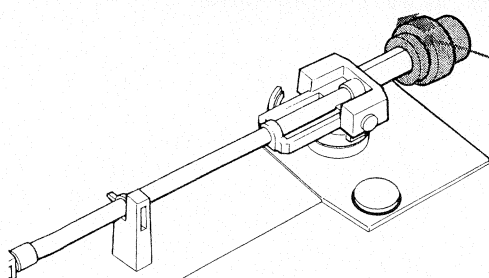
③ After the tonearm is balanced, replace the stylus guard and secure the tonearm to its rest.

④ While making sure that the counterweight remains in the balanced position, carefully turn the tracking force ring until the "0" indication is aligned with the center line on the tonearm.



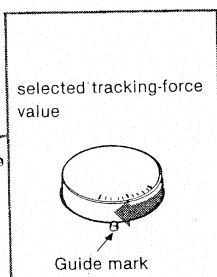
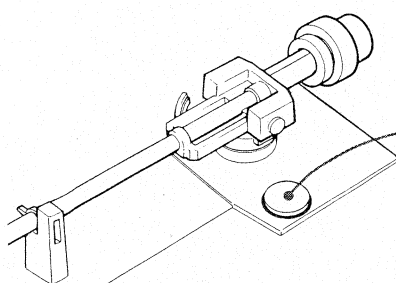
TRACKING FORCE*1 ADJUSTMENT

Turn the counterweight as illustrated so that the recommended tracking force for your cartridge is aligned with the center line on the tonearm. The maximum tracking force available is 3 grams.



ANTI-SKATING*2 COMPENSATION

Turn the anti-skating compensator so that the guide mark is aligned with the selected tracking force value.



When the adjustment is complete

Press the POWER switch. The turntable will start rotating. Then press the START/STOP button to lift the cueing platform and stop the turntable rotation.

*1 Tracking force

Tracking force is the vertical force applied to the stylus tip so that it can accurately trace a record groove.

The tracking force is applied after the tonearm is balanced.

Since the proper tracking force differs depending on which cartridge is installed, be sure to apply the tracking force recommended for your cartridge. If the tracking force is too light, the stylus will skip grooves. When it is too heavy, the stylus tip and the record will wear excessively. Note that if you play a record at a temperature below 10°C (50°F), or if the record to be played is badly warped, the tracking force should be increased by 20%.

*2 Anti-skating compensator

While the record is being played, friction between the record groove and the stylus produces a force that tends to drive the tonearm toward the center of the record.

The anti-skating compensator cancels this force. The anti-skating force should be the same value as the tracking force.

Incorrect adjustment of the anti-skating compensator results in sound distortion and uneven wear on both the stylus and the record.

TIPS ON RECORD HANDLING

- Before playing, clean the record with a record cleaner or soft cloth. If a spray cleaner is used, make sure that it has dried completely before playing the record. Playing the record before the cleaner has dried may damage the record.

It is a good idea to clean the record again before putting it away.

- Handle a record by its edges and do not touch the grooves.

Fingerprints on the record surface may encourage an accumulation of dust, resulting in impaired tone.

- Use a commercially available anti-static spray to neutralize the static electricity on a record.

- Avoid exposing a record to direct sunlight or sources of heat, such as a hot-air duct.

- Store your records vertically. They should not be compressed.

ONEARM DROP-POINT ADJUSTMENT

The tonearm's drop-point during auto play has been adjusted at the factory. If this needs to be readjusted, proceed as follows.

- 1 Be sure that the turntable is turned off and the tonearm is secured to the arm rest.

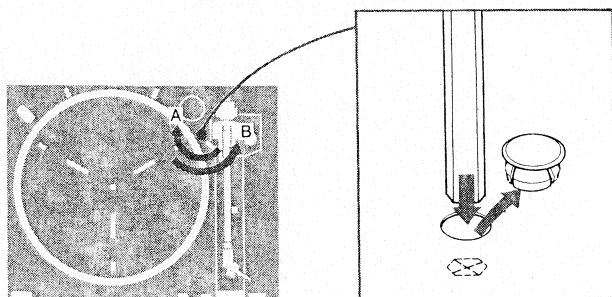
- 2 Remove the plastic cap over the tonearm drop-point adjustment opening located at the left side of the arm base.

- 3 Insert the a hexagonal pencil or a screwdriver into the opening.

To move the drop-point inward . . . turn the screw in direction A.

To move the drop-point outward . . . turn the screw in direction B.

- Be sure not to turn the screw in direction B so far that the stylus tip cannot make contact with the record.



- 4 Start auto play and check that the stylus lowers on the correct drop-point.

- If the drop-point is correct for 30 cm (12 inch) records, it will also be correct for 17 cm (7 inch) records.

MAINTENANCE

Stylus

Before playing a record, clean the stylus with a soft brush. Brush the stylus from back to front. Never attempt to clean the stylus with your finger tip. If a fluid stylus cleaner is used, make sure not to moisten the stylus too much.

Cabinet

Clean the cabinet and dust cover periodically with a soft dry cloth. If the stains are difficult to remove, use a cloth moistened with a mild detergent solution. Do not use solvents such as alcohol, benzine or thinner, since they will damage the finish.

Rubber mat

When the rubber mat becomes dirty, wipe it gently with a soft cloth slightly dampened with water.

Lubrication

The turntable requires no periodic lubrication. The motor shaft is lubricated at the factory for the life of the turntable.

SPECIFICATIONS

Turntable

Platter	31 cm (12 ¹ / ₄ in.), aluminum-alloy diecast
Motor	Linear torque BSL (brushless and slotless) motor
Drive system	Direct drive
Control system	Magnetdisc servo control system
Speed	33 ¹ / ₃ rpm, 45 rpm
Starting characteristics	Comes to nominal speed within a 1/2 revolution (33 ¹ / ₃ rpm)
Wow and flutter	0.02% (WRMS)* 0.025% (WRMS) ±0.04% (DIN)
Signal-to-noise ratio	75 dB (DIN-B)
Automatic system	Lead-in, return, reject, repeat, record size selection

Tonearm

Type	Statically balanced
Pivot-to-stylus length	216.5 mm (8 ⁵ / ₈ in.)
Overhang	16.5 mm (2 ¹ / ₃₂ in.)
Stylus force adjustment range	0 – 3 g
Cartridge weight range (including a cartridge shell)	7.5 – 12 g

Cartridge XL-150

Type	Moving magnet type
Frequency response	10 Hz to 25 kHz
Channel separation	20 dB at 1 kHz
Output voltage	3 mV at 1 kHz, 5 cm/sec.
Load impedance	50 to 100 kilohms
Tracking force	1.3 to 2.3 g (1.8 g recommended)
Stylus	Sony ND-150G (conical 0.6 mil diamond)
Weight	8.8 g

General

Power requirements	Type 1: 220 V ac Type 2: 240 V ac Type 3: 110-120 or 220-240 V ac adjustable 50/60 Hz
Power consumption	9 W
Dimensions	Approx. 430 × 105 × 355 mm (w/h/d) (17 × 4 ¹ / ₄ × 14 in.) including projecting parts and controls
Weight	Approx. 6.1 kg (13 lbs 7 oz), net Approx. 7.4 kg (16 lbs 5 oz), in shipping carton
Supplied accessories	45-rpm adaptor (1) Cartridge XL-150 (1) Tracking force setting guide (1) Disc centering guides (2)

Note

Appliance conforms with EEC Directive 76/889 regarding interference suppression.

* This new measuring method concerns only the turntable assembly, including the platter. It excludes wow and flutter caused by the tonearm, the cartridge, or the record. Measured by obtaining signal from magnetic pick-up head.

While the information given is correct at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Sony dealer if clarification on any point is required.

TROUBLE CHECKS

The following trouble checks will help you correct most common problems encountered with a turntable system. Should any problem persist after you have made these checks, consult your nearest Sony service facility.

Before proceeding with these trouble checks, first refer to the connections and the operating procedures on page 6.

TROUBLES	CAUSES	WHAT TO DO
The tonearm does not move.	Transparent record Warped record	Turn the rubber mat 180° and play the record manually.
The tonearm always lowers on the point for 30 cm records.	A rubber mat other than the one supplied being used. Incorrect placement of the supplied rubber mat	Use the supplied rubber mat. Align the holes in the rubber mat with the holes of the platter.
Impaired tone quality	Improper tonearm balance or tracking-force Dusty stylus Worn stylus	Adjust the tonearm, referring to page 10. Clean the stylus with a soft brush from back to front. The stylus life is approx. 400 hours. Replace with a new stylus.
Auto return does not operate at the end of play.	A record with shallow return grooves being played by a cartridge with low tracking force	Apply more tracking-force.
No audio from one channel or either channels.	Loose connection of phono cord Loose attachment of the cartridge shell to the tonearm Dirty terminals of the cartridge shell	Connect the cord firmly. Fix the shell to the tonearm firmly. Clean the terminals with a soft dry cloth.
Steady low-pitched humming sound	Ground wire is not connected to the amplifier.	Connect the ground wire to the amplifier.
Groove skipping; tonearm skating; tonearm not advancing.	Improper tracking force Turntable not level Defective record	Apply proper tracking-force. (See page 11.) Place the turntable on a level surface.
Loud rumble or low-frequency howl*	The turntable is subjected to external vibration. The turntable is placed too near the speaker.	Place the turntable on a solid surface free from external vibration. Locate the turntable as far away from the speaker as possible.

* This is called "acoustic feedback" and is caused when vibrations from the speakers are transmitted through the air or via solid objects (such as the shelves, the cabinet, the floor, etc.) to the turntable, where it is picked up by the stylus, amplified and reproduced through the speakers once again.